



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,056	05/05/2004	Chao-Nan Chien	JLINP181	6634
25920 7590 07/06/2007 MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085			EXAMINER LEO, LEONARD R	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 07/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/840,056  
Filing Date: May 05, 2004  
Appellant(s): CHIEN ET AL.

**MAILED**  
**JUL 06 2007**  
**GROUP 3700**

---

Albert S. Penilla  
For Appellants

---

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed December 21, 2006 appealing from the Office action mailed August 9, 2006.

Art Unit: 3744

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection is substantially correct. The changes are as follows:

Whether claims 1-3, 10-11 and 13 are unpatentable under 35 U.S.C. 102(b) over Ito.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

Art Unit: 3744

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-14 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito (Figures 5A, 6 and 9). Figures 6 and 9 of Ito discloses a cooling fin 18, 19 having a heat radiation part and a bonding part bent and brazed to a substrate 12 (Figure 2), where the bonding part has a “vacant region” 18g, 19g.

Regarding claims 2-3 and 14, Figures 6 and 9 of Ito discloses notches 18g and 19g, respectively, which is read as defining a “serrate edge.”

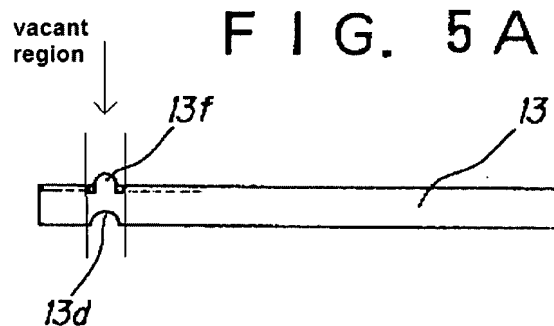
Regarding claims 7-8 and 18-19, Ito (column 5, lines 23-30) discloses an aluminum substrate 12 and thermally conductive sheet 13.

Art Unit: 3744

**(10) Response to Argument**

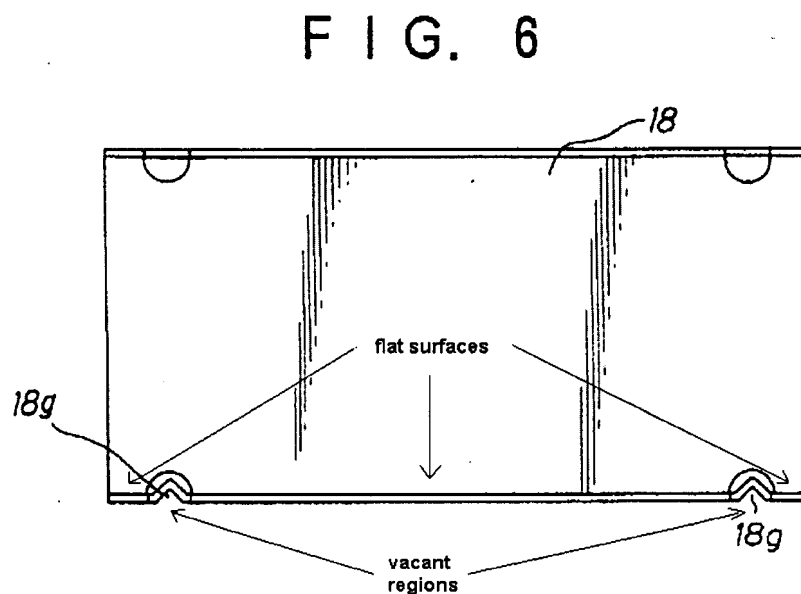
Initially, it is noted claims 7-9, 12, 14 and 18-19 are not appealed.

Appellant's remarks with respect to the rejection of claim 1 are not commensurate in scope with the claim. Figures 6 and 9 (column 6, lines 27-41 and column 7, lines 12-19) of Ito disclose concave sections 18g, 19g *coinciding* with "vacant regions" in the flat surface of the bonding part in the space provided on the line in Figure 5A (as shown below).



Note, the concave sections 18g, 19g are *not* in the plane of the flat surface of the bonding part.

Only the vacant regions are in the plane of the flat surface of the bonding part as shown below.



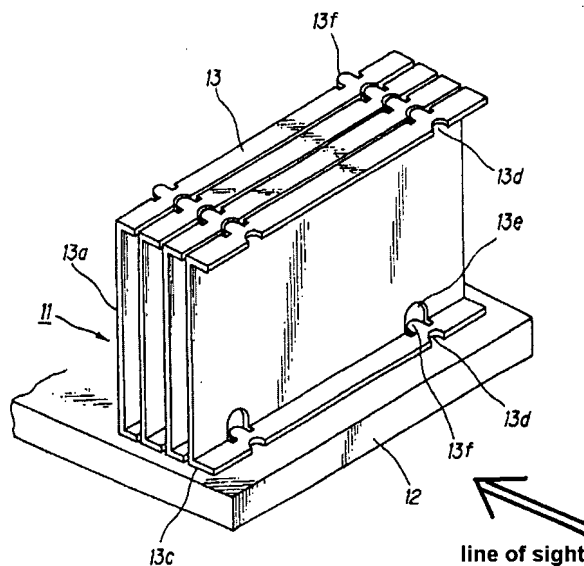
Art Unit: 3744

The open-ended language of comprising does not preclude the presence of the concave sections 18g, 19g in addition to the “vacant region” along the flat surface of the bonding part.

Furthermore, appellant’s reading of the function of the concave sections is misplaced. Ito discloses the exact same purpose as appellant’s invention. Any excess brazing, i.e. high temperature solder, that flows from the mating surfaces of the bonding part and substrate will collect in the vacant regions under the concave sections 18g, 19g without flowing beyond the substrate periphery. The concave sections 18g, 19g are not mating notches, but braze collectors.

Appellant’s remarks with respect to the rejection of claim 11 are not commensurate in scope with the claim. The claim does not recite the perspective of the vacant region that is not covered. As shown below, in the perspective taken in the direction of the arrow in Figure 2 and into the plane of the sheet of Figure 6 and 9, the vacant region is not covered, in that an unobstructed line of sight extends between the substrate 12 and the concave sections 18g, 19g prior to any collection of braze solder.

FIG. 2



Art Unit: 3744

If the vacant region were in fact covered, then there would cease to be any vacant region and the flat surface of the bonding part would be as in appellant's Prior Art Figures 1A-1C. Again, appellant's reading of the function of the concave sections is misplaced. Ito discloses the exact same purpose as appellant's invention. Any excess brazing, i.e. high temperature solder, that flows from the mating surfaces of the bonding part and substrate will collect in the vacant regions under the concave sections 18g, 19g without flowing beyond the substrate periphery. The concave sections 18g, 19g are not mating notches, but braze collectors.

Appellant's remarks with respect to the rejection of claims 2-3 are not commensurate in scope with the claim. The notches coinciding with concave section 18g, 19g of Ito are vacant regions and are read as defining a "serrate edge." By definition, a serrate is a notched edge, not exclusively teeth like a saw. The definition and claim does not specific the notching is continuous or a series.

Appellant's remarks with respect to the rejection of claims 10 and 13 are not commensurate in scope with the claim. As noted above, the open-ended language of comprising does not preclude additional structure to be read into the claim. As such, Figure 6 disclosing a bracket shape (i.e. ]-shaped in Figure 3) and Figure 9 disclosing a Z letter shape (i.e. Figure 8) have an L-shape along with top portions.

Appellant's remaining remarks are not appealable issues.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

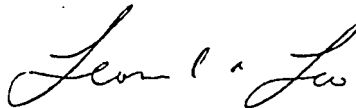
Application/Control Number: 10/840,056

Page 7

Art Unit: 3744

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



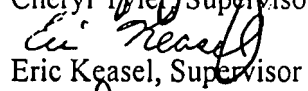
LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3744

June 15, 2007

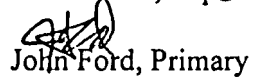
Conferees:



Cheryl Tyler, Supervisor



Eric Keasel, Supervisor



John Ford, Primary

FIG. 5

